

## WHAT IS CLAIMED IS:

1. An apparatus for guiding a plank towards cutting tools, the apparatus comprising:
  - 5 evaluation means for evaluating the plank and generating a signal representing at least one parameter of the plank;
  - a frame;
  - a platform mounted on the frame and having a support surface for supporting the plank;
- 10 a first guide and drive mechanism mounted on the platform for receiving, guiding and driving the plank along a path on the support surface, the first mechanism comprising two first guide and drive elements arranged opposite relative to the path;
  - a second guide and drive mechanism mounted on the platform for guiding and
- 15 driving the plank from the first mechanism along the path on the support surface up to the cutting tools, the second mechanism comprising two second guide and drive elements arranged opposite relative to the path and being substantially parallel to the path, the guide and drive elements of the mechanisms located on a same side of the path being connected by a pivot axis; and
- 20 displacing means for displacing the guide and drive elements from the first and second mechanisms in parallel and equidistant in relation to the path, in response to the signal.

  

2. The apparatus according to claim 1, wherein the platform comprises two support plates equidistant in relation to the path, the guide and drive elements of the mechanism located on the same side of the path being mounted on the corresponding support plate, the apparatus further comprising two actuators for displacing the support plates transversally in relation to the path in response to the signal, each of the actuators being mounted transversally relative to the path and comprising a first end fixed to the frame and a second end fixed to the corresponding support plate.

3. The apparatus according to any of the claims 4, 6, wherein each of the guide and drive elements of the mechanisms comprises an endless belt having an exterior surface covered with a toothed chain mat, and toothed wheels for driving the belt.

5 4. The apparatus according to claim 3, wherein the guide and drive elements of the mechanisms located on the same side of the path have a common toothed wheel which is able to turn about the pivot axis, the belts of the guide and drive elements of the mechanism located on the same side of the path together forming a single belt.

10 5. The apparatus according to any of claims 3 and 4, wherein each of the guide and drive elements of the mechanisms comprises a support wall facing the path and located between the intended wheels for supporting the belt.

15 6. The apparatus according to any of claims 1 to 5, wherein the displacing means comprises:  
first and second pairs of jointed arms located on either side of the path, the arms of each pair being arranged in parallel, the arms of each pair being mounted between the support surface and the corresponding second guide and drive element; and  
a mechanical connection linking the first and second pairs of jointed arms for coordinating a movement of the pairs of jointed arms in parallel and equidistant relative to the path.

20 7. The apparatus according to claim 6, wherein the mechanical connection comprises means for adjusting the length of the mechanical connection according to the distance between the support plates.

25 8. The apparatus according to claim 7, wherein the means for adjusting the length of the mechanical connection comprise an actuator mounted on the mechanical connection between the first and second pairs of jointed arms.

30

9. The apparatus according to any of claims 1 to 8, wherein the first and second guide and drive mechanisms comprise means for exerting a pressure on the first and second guide and drive elements on each side of the plank.
- 5 10. The apparatus according to claim 9, wherein the means for exerting a pressure on the first guide and drive elements comprise two actuators being mounted between the first guide and drive element and the second guide and drive element of a same side of the path.
- 10 11. The apparatus according to claim 9, wherein the means for exerting a pressure on the second guide and drive elements comprise two actuators being mounted between the support surface and the corresponding second guide and drive element.
- 15 12. The apparatus according to claim 9, wherein the means for exerting a pressure on the first guide and drive elements comprise two bellows being mounted between the first guide and drive element and the second guide and drive element of a same side of the path.
- 20 13. The apparatus according to claim 9, wherein the means for exerting a pressure on the second guide and drive elements comprise two bellows being mounted between the support surface and the corresponding second guide and drive element.
- 25 14. The apparatus according to any of claims 1 to 13, further comprising two trimming heads mounted on either side of the path.
15. The apparatus according to any of claims 1 to 14, further comprising detection means for detecting different positions of the plank in the apparatus, and
- 30 activation means for activating the first and second guide and drive mechanisms as a function of the different positions of the plank.

16. The apparatus according to claim 15, wherein the detection means comprise photocells for detecting a displacement of the plank when said plank is received by the first guide and drive mechanism.

5 17. A method for guiding a plank towards cutting tools, comprising the following steps:

- a) evaluating the plank and generating a signal representing at least one parameter of the plank;
- b) receiving, guiding and driving the plank along a path by a first guide

10 and drive mechanism, the first mechanism comprising two first guide and drive elements arranged opposite relative to the path;

- c) guiding and driving the plank by a second guide and drive mechanism from the first mechanism along the path up to the cutting tools, the second mechanism comprising two second guide and drive elements arranged opposite relative to the path and being substantially parallel to the path, the guide and drive elements of the mechanism located on the same side of the path being connected by a pivot axis; and
- d) displacing the guide and drive elements of the first and second mechanisms in a way that is parallel and equidistant in relation to the path in

15 20 response to the signal.